

XLIV.—*On the Classification of Buprestidæ and Elateridæ, with special regard to the Danish Fauna.* By Prof. J. C. SCHIÖDTE.

[Continued from p. 212.]

Systematic Table of the Danish Buprestidæ and Elateridæ.

BUPRESTIDÆ.

(Tarsi quinquearticulati. Antennæ filiformes. Corpus durum. Coxæ anticæ globosæ. Coxæ posticæ transversæ, fixæ. Prosternum processu postico producto.)

Epimera mesothoracica inter episterna et humeros elytrorum ad epimera prothoracis ascendentia et cum iis articulata.

Prosternum mucrone saltatorio nullo, mesosterno receptum.

Segmenta ventralia duo priora concreta.

Procursus ventrales laterales epimera metathoracica attingentes, spiracula metathoracica in segmento mediali sita extrorsum cingentes; procursus ventralis medius inter coxas posticas ad mesosternum usque procedens.

Mandibulæ tetragonæ, crassæ, cochleariformes.

Alæ in longitudinem plicatæ.

Pedes ambulatorii trochanteribus posticis simplicibus, tarsis pulvillatis.

Oculi oblongi.

Tracheæ vesiculosæ. Glandulæ salivales in capite sitæ, filiformes, fasciculato-ramosæ. Ventriculus chylicus bicornis, parte postica in spiram convoluta. Vasa malpighiana terna, apice intestino ileo affixa. Folliculi testiculorum scroto inclusi, gracillimi, longissimi, apice conjunctim in spiram contorti; vesiculæ seminales binæ. Receptaculum seminis feminae simplex, glandula appendiculari nulla. Systema nervorum: ganglion mesothoracis, cum ganglio metathoracis concretum; ganglia abdominalia quinque, duo priora in thorace sita; ganglion abdominale primum a ganglio metathoracico discretum.

Mandibulæ acie et fimbriis carentes, fovea articulari superiore ampla, condylo inferiore magno, prominente, collo distincto, capite globoso. Maxillæ malis coriaceis, dense breviter spinulosis. Lingua coriacea, crassa, pulvinata, integra, obtusa, spinulosa, stipite nullo. Antennæ poriferæ. Prosternum procursu labiali proprio nullo.

Tribus Anthaxiini.

Mandibulæ depressiusculæ, apice lobatæ, lobo terminali introrsum sub apicem profunde excavato.

Partes oris graciliores; malæ maxillarum triangulæ.

Sulci antennarii nulli.

Aræe poriferæ antennarum in parte articulorum inferiore sitæ, deorsum spectantes.

(Esophagus sacculis utrinque appendiculatus.)

CHRYSOBOTHRI, Eschltz.

Palpi maxillares articulo secundo elongato, terminali subcylindrico, truncato, pænultimum non complente. *Palpi labiales* clavati, articulo ultimo truncato. *Mentum* trapezoideum, transversum, fulcro brevi. *Lingua* ampla, late rotundata. *Antennæ* articulo primo et tertio productis, deinde profunde serratæ, areis poriferis concavis. *Femora* prima dentata. *Tibiæ* primæ et mediæ incurvæ. *Pronotum* basi lobatum.

(The space between the eyes in front much narrower towards the top. The coxal process of the prosternum broad. Scutellum elongated, triangular, pointed. First tarsal joint elongated. Second, third, and fourth abdominal segments with denticulated hind corners; fifth joint with a keel in the middle.)

(*C. affinis*, Fabr., r.; *C. chrysostigma*, L., r.)

MELANOPHILA, Eschltz.

Palpi maxillares articulo secundo brevi, terminali cylindrico, truncato, pænultimum superante. *Palpi labiales* clavati, articulo ultimo brevi, crassissimo, truncato. *Mentum* transversum, utrinque rotundatum, fulcro amplissimo. *Lingua* apicem versus angustata. *Antennæ* graciles, ab articulo tertio vel quarto obtuse serratæ, areis poriferis convexis. *Tibiæ* rectæ. *Pronotum* basi lobatum.

(The space between the eyes in front slightly narrower towards the top. The coxal process of the prosternum broad, with three points. Scutellum small, triangular, with round corners. The abdominal segments without teeth.)

(*M. cyanea*, Fabr., in timber-yards; *M. appendiculata*, Fabr., r.)

ANTHAXIA, Eschltz.

Palpi maxillares articulo ultimo ovato, apice truncato. *Palpi labiales* filiformes, articulo ultimo conico, sesqui minore quam pænultimo. *Mentum* trapezoideum, transversum, fulcro brevissimo. *Lingua* late rotundata. *Antennæ* inde ab articulo quarto profunde serratæ, areis poriferis convexis. *Tibiæ* rectæ. *Pronotum* basi truncatum.

(First pair of femora without tooth. Scutellum equilateral, triangular. Prosternal spine broad, with truncated point. Abdominal segments edentate.)

(*A. quadripunctata*, L., in timber-yards.)

Tribus Buprestini.

Mandibulæ cuneiformes, apice integræ, parte interiore tota profunde excavata, margine cavernæ utroque denticulato.

Mentum breve, transversum, utrinque rotundatum, medio profunde emarginatum, fulcro labii amplo.

Maxillæ mala exteriore ampla, fornicata, cardine piriformi, libero.

Palpi maxillares articulo secundo brevi, terminali clavato, truncato, pænultimum superante.

Palpi labiales integri, clavati.

Areæ poriferæ antennarum in parte posteriore vel in utroque latere articulorum sitæ.

BUPRESTIS, L.

Antennæ breviores, profunde serratæ; areæ poriferæ minutæ, rotundatæ, profunde foveolatæ, sub angulum inferiorem lateris posterioris articulorum sitæ. *Prosternum* pone cõxas anticas utrinque angulatum. *Epimera* mesothoracica margine priore subrecto.

(*B. mœsta*, Fabr., in timber-yards.)

CHALCOPHORA, Sol.

Antennæ graciliores, obtuse serratæ; areæ poriferæ amplæ, oblongæ, vix excavatæ, marginem inferiorem articulorum æquo intervallo sequentes, in utroque latere obviæ. *Prosternum* pone coxas anticas utrinque angulatum. *Epimera* mesothoracica margine anteriore angulato.

(*Ch. mariana*, L., in timber-yards.)

ANCYLOCHIRA, Eschltz.

Antennæ graciliores, obtuse serratæ; areæ poriferæ majores, profunde excavatæ, in angulo inferiorem lateris posterioris articulorum sitæ. *Prosternum* sensim acuminatum. *Epimera* mesothoracica margine anteriore subrecto. *Tibiæ* anticæ maris uncinatæ.

(1. *A. splendida*, Payk., r.; 2. *A. rustica*, L.; and 3. *A. punctata*, Fabr., all three in timber-yards; 4. *A. flavomaculata*, Fabr., r.)

Tribus Agrilini.

Mandibulæ cuneiformes, apice integræ, parte interiore tota profunde excavata; marginibus cavernæ inermibus.

Maxillæ cardine gracili, elongato, sub mentum condito, malis obtusis.

Fulcrum labii evanidum.

Palpi labiales manci, articulo primo vel binis prioribus evanidis.

Sulci antennarii capiti sub oculos impressi.

Areæ poriferæ antennarum profunde excavatæ, in latere posteriore articulorum sub apicem sitæ.

Pronotum basi lobatum.

Ann. & Mag. N. Hist. Ser. 3. Vol. xviii.

AGRILUS, Meg.

Mandibulæ acutæ. *Palpi maxillares* filiformes, articulo ultimo fusiformi, truncato. *Mentum* triangulum. *Palpi labiales* biarticulati, articulo ultimo elongato, subcylindrico, truncato. *Antennæ* inde ab articulo quarto serratæ. *Sulci antennarii* brevissimi, in tempora non continuati. *Tarsi* postici longitudine tibiæ, articulo primo producto. *Unguiculi* dentati. *Scutellum* manifestum, basi transversum, postea subito acuminatum. *Epipleuræ prothoracicæ* carinatæ. *Corpus* productum.

(1. *A. viridis*, L., m. fr.; 2. *A. angustulus*, Illig., m. fr.; 3. *A. laticornis*, Illig., r.)

TRACHYS, F.

Mandibulæ obtusæ, foveola interiore amplissima. *Palpi maxillares* clavati, articulo ultimo magno, ovato. *Mentum* triangulum, latere utroque angulato. *Palpi labiales* biarticulati, subcylindrici, articulo ultimo brevi. *Antennæ* inde ab articulo septimo serratæ. *Sulci antennarii* in tempora continuati. *Tarsi* brevissimi. *Unguiculi* dentati. *Scutellum* minutissimum triangulum. *Corpus* breve.

(1. *T. minuta*, L., m. fr.; 2. *T. troglodytes*, Gyll., r.)

APHANISTICUS, Latr.

Mandibulæ acutissimæ. *Palpi maxillares* clavati, articulo ultimo ovato. *Mentum* breve, transversum, utrinque rotundatum. *Palpi labiales* unico constantes articulo elongato, subcylindrico. *Antennæ* inde ab articulo octavo serratæ. *Sulci antennarii* in tempora et epimera prothoracis continuati. *Tarsi* brevissimi. *Unguiculi* inermes. *Scutellum* minutissimum, triangulum. *Corpus* productum. *Tempora* producta, oculis multo longiora. *Femora* dilatata.

(*A. pusillus*, Oliv., r.)

ELATERIDÆ.

(*Tarsi* quinquearticulati. *Antennæ* filiformes. *Corpus* durum. *Coxæ* anticæ globosæ. *Coxæ* posticæ transversæ, fixæ. *Prosternum* processu postico producto.)

Epimera mesothoracica *epimera prothoracica* non attingentia, articulo cum prothorace non conjuncta.

Prosternum aut supra sub apicem mucrone armatum saltatorio, aut in mucronem saltatorium sensim transiens. *Meso-sternum* fovea profunda mucronem excipiens.

Procursus ventrales *epimera metathoracica* non attingentes, spiracula metathoracica extrorsum libera, inter *epimera* et *procursus ventrales* sita; *procursus ventralis* medius brevis, ad metasternum vix procedens.

Mandibulæ triquetræ, fornicatæ, apicem versus extenuatæ.

Alæ in longitudinem et transverse plicatæ.

Pedes cursorii trochanteribus posticis fulcientibus.

Oculi rotundati.

Tracheæ vesiculis carentes. Glandulæ salivales propriæ nullæ. Ventriculus chylicus simplex, subrectus. Vasa malpighiana bina, apice libera. Folliculi testiculorum scroto carentes, oblongi vel globosi; vesiculæ seminales ternæ, structura maxime variantes. Receptaculum seminis feminae structura valde varians, sæpissime duplex aut multiplex, glandula appendiculari magna, sæpissime ramosa. Systema nervorum: ganglia thoracica discretæ; ganglia abdominalia octo, duo priora in thorace sita; ganglion abdominale primum ganglio metathoracico applicatum.

Sectio Prima.

Mandibulæ fimbriis carentes. Scrobiculi antennarii genis impressi. Prosternum procursu labiali nullo.

(Epimera mesothoracica coxas attingentia. Epipleura elytrorum costa laterali obtusa. Segmenta ventralia præter terminale immobilia).

Tribus 1. Melasini.

Mandibulæ basi tumidæ, parte interna excavata; condylo inferiore maximo, fovea articulari superiore amplissima.

Maxillæ stipite palpigero distante, articuliformi, mala unica, tenui, apice brevissime barbata.

Lingua minuta, integra, obtusa, stipite nullo.

Palpi clavati, articulo ultimo magno, ovato.

Prothorax sulcis antennariis nullis; prosternum processu postico acuto, mucrone saltatorio valde discreto, sursum ascendente.

MELASIS, Oliv.

Mandibulæ acutæ, basi valde tumidæ, tumore supra rotundato. *Palpi maxillares* articulo ultimo apice summo truncato, articulum terminalem palporum labialium duplo superante. *Palpi labiales* articulo primo tenui, secundum longitudine superante. *Mentum* breve, transversum. *Antennæ* serratæ, basi distantes. *Tibiæ* compresse dilatatæ; *tarsi* compressi, articulo quarto integro. *Coxæ posticæ* lamina femorali ampla, extrorsum emarginata. *Segmentum* ultimum ventris apice compresse carinatum.

(*M. Buprestoides*, L., m. fr.)

XYLOBIUS, Latr.

Mandibulæ trilobæ, lobo intermedio introrsum excavato, basi tumidæ, tumore dorso corniculato. *Palpi* subæquales, articulo ultimo maximo. *Mentum* trapezoideum. *Antennæ* teretes, basi vicinæ.

Tibiæ teretes. Tarsi graciles, articulo quarto trilobo. Segmentum ultimum ventris apice rotundatum.

(*X. Alni*, Fabr., m. fr.)

Tribus 2. Eucnemidini.

Mandibulæ introrsum carinatæ.

Maxillæ malis binis, membranaceis, breviter barbatis.

Lingua lata, tenuis, membranacea, emarginata, stipites palporum labialium non multum excedens, stipite evanido.

Palpi securiformes.

Mentum transversum, trapezoideum.

Sulci antennarii in epimera prothoracis plus minusve continuati.

Prosternum mucrone saltatorio sursum ascendente.

EUCNEMIS, Ahr.

Mandibulæ acutæ, integræ, fovea articulari superiore amplissima, condylo inferiore maximo. Palpi maxillares articulo terminali maximo, pænultimum sesqui superante, apice recte truncato. Palpi labiales articulo terminali maximo, articulum ultimum palporum maxillarium sesqui superante, angulo interiore producto. Sulci antennarii epimerorum marginales, valde profundi. Coxæ posticæ lamina femorali ampla, post acuminata. Prosternum processu postico acuminato. Mentum subquadratum.

(*E. capucinus*, Ahr., r.)

MICRORHAGUS, Chevrol.

Mandibulæ trilobæ, dorso inferiore corniculato. Palpi maxillares articulo terminali maximo, pænultimum duplo superante, apice oblique truncato, angulo exteriore valde producto. Palpi labiales articulo terminali dimidiam palporum maxillarium articuli ultimi magnitudinem vix superante, angulo exteriore producto. Sulci antennarii epimerorum ad suturas prosternales levius excavati. Coxæ lamina femorali brevi, introrsum dilatata, post rotundata. Prosternum processu postico acuminato. Mentum trapezoideum.

(*M. pygmaeus*, Fabr., r.)

THROSCUS, Latr.

Mandibulæ integræ, acutæ, acie tenui, utrinque minute mucronulata. Palpi articulo terminali magno, oblique truncato. Sulci antennarii prothoracis angulati, integri. Coxæ posticæ lamina femorali brevi, truncata. Prosternum processu postico marginato, apice rotundato, mucrone saltatorio obtecto. Mentum subquadratum, processu medio acuto. Tarsi articulo quarto bilobo. Antennæ ab articulo nono tantum serratæ, clavam simulant.

(1. *T. dermestoides*, L., fr.; 2. *T. obtusus*, Curtis, r.)

Sectio Secunda.

Mandibulæ fimbriatæ. Scrobiculi antennarii capitis nulli. Prosternum procursu labiali manifesto, ab epimeris incisura acuta utrinque discreto.

Tribus 3. Elaterini.

Mandibulæ bifidæ.

Maxillæ malis binis, triangulis, dense barbatis.

Mentum trapezoidicum.

Lingua ampla, tenuis, membranacea, barbata, stipites palporum labialium valde excedens, biloba, lobis arcu contiguis, stipite angusto, corneo.

Prosterni processus posticus plerumque acuminatus, mucrone saltatorio retroverso, processum superante, vel in mucronem saltatorium sensim transiens.

I. Segmenta ventralia cornua, præter terminale immobilia. Scrobiculi femorales prothoracis foris oclusi. Mesosternum apice bifidum. Oculi immersi.

A. Epimera mesothoracica coxas non attingentia.

a. Sulci antennarii prothoracis nulli.

CARDIOPHORUS, Eschltz.

Prosternum processu postico brevissimo, mucrone saltatorio crasso. *Coleoptera* prothoraci innata. *Scutellum* cordatum, sulcatum.

(1. *C. ruficollis*, L., m. fr.; 2. *C. asellus*, Erichs., m. fr.)

CRYPTOHYPNUS, Eschltz.

Prosternum processu postico elongato, in mucronem saltatorium sensim transiens. *Coleoptera* prothoraci superposita. *Scutellum* triangulum, integrum.

(1. *C. quadripustulatus*, Fabr., fr.; 2. *C. sabulicola*, Boheman, r.; 3. *C. pulchellus*, L., fr.)

b. Sulci antennarii prothoracis profundi, antennis curvatas excipientes.

LACON, Latr.

Prosternum processu postico elongato, mucrone saltatorio producto. *Coleoptera* prothoraci innata.

(*L. murinus*, L., fr.)

B. Epimera mesothoracica coxas attingentia.

a. Sulci antennarii prothoracis profundi, antennis totas excipientes.

LISSOMUS, Dalm.

Sulci antennarii prothoracis decurtati, antennis curvatas exci-

pientes. *Prosternum* processu postico marginato, apice rotundato, mucrone saltatorio obecto. *Tarsi* articulis ternis intermediis pulvillatis.

(*L. equestris*, Fabr., r.)

ADELOCERA, Latr.

Sulci antennarii prothoracis integri, antennis directas excipientes. *Prosternum* processu postico elongato, in mucronem saltatorium sensim transiens. *Tarsi* pulvillis carentes. *Episterna metathoracica* epipleuris elytrorum tota obecta.

(*A. lepidoptera*, Panz., in timber-yards, r.)

b. *Sulci antennarii* prothoracis brevissimi, obscuri vel nulli.

α. Unguiculi serrati. Antennæ areis poriferis manifestis. Elytra costa laterali evanida.

MELANOTUS, Eschltz.

Palpi securiformes. *Prosternum* processu postico crasso, in mucronem saltatorium sensim transiens. *Sulci antennarii* prothoracis brevissimi. *Frons* laminata.

(1. *M. niger*, Panz., r.; 2. *M. brunnipes*, Germ., r.; 3. *M. castanipes*, Payk., fr.¹)

ADRASTUS, Meg.

Palpi articulo terminali acuminato. *Prosternum* processu postico acuto, mucrone saltatorio valde discreto. *Sulci antennarii* prothoracis nulli. *Frons* deflexa.

(*A. limbatus*, F., fr.)

β. Unguiculi inermes.

† *Tarsi* pulvillis carentes.

ELATER, L.

TABULA SYNOPTICA SUBGENERUM.

1. *Prosterni* processus posticus mucrone saltatorio manifesto, discreto. Elytra costa laterali evanida.

A. *Sulci antennarii* prothoracis brevissimi.

a. *Frons* deflexa.

* *Epimera* prothoracis dentata. Anguli antichi prothoracis deflexi. Antennæ utriusque sexus areis poriferis manifestis.

1. *Agriotes*, Eschltz.

(1. *E. aterrimus*, L., fr.; 2. *E. pilosus*, Panz., r.; 3. *E. pallidu-*

¹ A. The eyes granulated; posterior corners of the pronotum with short dorsal ridge; hind feet not longer than tibiae; hairy covering of antennæ the same in both sexes (*M. niger*, *M. brunnipes*). B. Eyes smooth, the ridge on the hind corners of pronotum continued forwards along the sides; hind feet longer than tibiae; antennæ of male woolly underneath (*M. castanipes*). Prof. Schiödte does not admit *Cratonychus rufipes*, Erichs. (Germar, Zeits. iii. 96. 8) as a species distinct from *M. castanipes*, Payk., and states that *E. bicolor*, Fabr., is a very different, southern species.

lus, Illig., fr.; 4. *E. sputator*, L., fr.; 5. *E. obscurus*, L., fr.; 6. *E. lineatus*, L., fr.; 7. *E. ustulatus*, Schaller, r.; 8. *E. marginatus*, L., fr.¹)

**Epimera prothoracis inermia. Anguli antici prothoracis porrecti. Antennæ maris poris indigestis, feminis areis poriferis manifestis.

2. *Sericosomus*, Serv.

(*E. brunneus*, L., m. fr.)

b. Frons laminata. Coxæ posticæ lamina femorali ampla, abrupte acuminata. Antennæ poris indigestis, infra crebrioribus.

3. *Ampedus*, Meg.

(1. *E. sanguineus*, Fabr., m. fr.; 2. *E. coccineus*, Germ., r.; 3. *E. dibaphus*, Schiödte, m. fr.; 4. *E. cardinalis*, Schiödte, r.²; 5. *E. præustus*, Fabr., m. fr.; 6. *E. ephippium*, Oliv., m. fr.; 7. *E. crocatus*, Castelnau, r.; 8. *E. elongatulus*, Fabr., fr.; 9. *E. elegantulus*, Germ., r.; 10. *E. balteatus*, L., fr.; 11. *E. nigrinus*, Payk, fr.; 12. *E. æthiops*, Boisd. & Lacord., r.)

B. Sulci antennarii prothoracis nulli.

a. Frons deflexa. Coxæ posticæ lamina femorali magna, sensim angustata. Antennæ areis poriferis manifestis.

4. *Ludius*, Latr.

(*E. ferrugineus*, L., r.)

b. Frons laminata. Coxæ posticæ lamina femorali ampla, abrupte acuminata. Antennæ poris indigestis.

5. *Ischnodes*, Germ.

(*E. sanguinicollis*, Panz., r.)

¹ The species are thus arranged:—A. Prosternal spine gradually pointed. Femoral lamina of posterior coxæ gradually narrowed. Pronotum longer than broad; a. lateral edges of pronotum entire, hind corners with sharp ridge. *Antennæ deeply serrated, as long as head and pronotum; eyes granulated (*E. aterrimus*). **Antennæ filiform, as long as head and pronotum; eyes smooth (*E. pilosus*). b. Side edges of pronotum interrupted in middle, hind corners without ridge; antennæ filiform, longer than head and pronotum; eyes granulated (*E. pallidulus*). B. Prosternal spine compressed behind the coxæ; antennæ filiform; †femoral lamina of posterior coxæ gradually narrowing; a. antennæ longer than head and pronotum; *pronotum longer than broad (*E. sputator*); **pronotum broader than long (*E. obscurus* and *E. lineatus*). b. Antennæ shorter than head and pronotum; pronotum of equal length and breadth (*E. ustulatus*); †† femoral lamina of posterior coxæ pointed (*E. marginatus*).

² Prof. Schiödte rejects the earlier attempts at a separation of the species of this subgenus with entirely red clytra: he shows that the characters adopted are unstable, and more particularly that the triangular form of the third joint of the antennæ, on which Kiesenwetter founds his *A. satrapa*, is a sexual peculiarity, the second and third joints of the antennæ varying considerably in shape and size according to the sexes. The synonymy of the

2. Prosterni processus posticus in mucronem saltatorium sensim transiens. Elytra costa laterali manifesta.

A. Epipleuræ elytrorum pone coxas posticas evanidæ.

a. Sulci antennarii prothoracis nulli.

α. Frons deflexa. Coxæ posticæ lamina femorali ampla.

6. *Megapenthes*, Kiesenw.

(*E. tibialis*, Boisd., r.)

β. Frons laminata.

* Coxæ posticæ lamina femorali angusta, sensim acuminata.

7. *Pheletes*, Kiesenw.

(*E. Bructeri*, Fabr., r.)

** Coxæ posticæ lamina femorali ampla, abrupte acuminata.

8. *Hypolithus*, Steph.

(*E. riparius*, Fabr., m. fr.)

b. Sulci antennarii prothoracis brevissimi. Frons laminata.

9. *Limonius*, Eschltz.

(1. *E. minutus*, L., fr. ; 2. *E. nigripes*, Gyll., m. fr. ; 3. *E. cylindricus*, Payk., fr.)

B. Epipleuræ elytrorum manifestæ. Sulci antennarii prothoracis nulli vel levissimi. Frons descendens.

10. *Diacanthus*, Latr.

(1. *E. tessellatus*, L., fr.¹ ; 2. *E. bipustulatus*, L., m. fr. ; 3. *E.*

two first-named species is uncertain. *E. cardinalis* was first discovered by Prof. Schiödte in Italy, but occurs also in Denmark. *E. dibaphus* ♂ has the third joint of the antennæ triangular. The four red species are distinguished principally by the proportions of length between pronotum, elytra, and antennæ. The elytra are in *E. sanguineus* twice and a half as long as the pronotum, in *E. cardinalis* rather less; in *E. dibaphus* the proportion is twice and three quarters, and in *E. coccineus* about three times. The antennæ are always about one-sixth shorter in the ♀ than in the ♂; in *E. sanguineus* ♂ they equal the pronotum to the point of the hind corners; in *E. dibaphus* ♂ and *E. coccineus* ♂ they exceed this measure not a little; but in *E. cardinalis* ♂ they are not longer than the pronotum measured along the middle line; in *E. cardinalis* the pronotum equals in length its own width measured over the hind corners, whilst it is shorter in the three other species, from which *E. cardinalis* is also distinguished by the punctures being much coarser on the head and pronotum, which are quite dull, and by the sides of the body being parallel in the middle. The transversal dip at the base of the pronotum is very marked in all these species except *E. coccineus*, where it is strikingly flat and shiny; but the extent and depth of the middle groove varies in all four species. Nor is the colour of the hairs of any value for the distinction of these difficult species. The antennæ are black in *E. sanguineus* and *E. dibaphus*, brown in *E. cardinalis*, and light brown in *E. coccineus*.

¹ Linné's *E. tessellatus* (Fauna Succ. 739) has, since the time of Olivier,

cinctus, Payk., m. fr.; 4. *E. quercus*, Gyll., r.; 5. *E. æneus*, L., fr.; 6. *E. cruciatus*, L., m. fr.; 7. *E. impressus*, Fabr., r.; 8. *E. metallicus*, Payk.; 9. *E. sjælandicus*, r.; 10. *E. pectinicornis*, L., fr.; 11. *E. castaneus*, L., m. fr.¹)

†† Tarsi pulvillati.

ATHOUS, Eschltz.

Prosterni processus posticus in mucronem saltatorium sensim transiens. *Elytra* costa laterali manifesta. *Sulci antennarii* prothoracis nulli. *Frons* laminata.

(1. *E. mutilatus*, Rosenhauer, r.; 2. *E. niger*, L., fr.; 3. *E. rhombeus*, Oliv., r.; 4. *E. ruficaudis*, Gyll., fr.; 5. *E. vittatus*, Fabr., fr.; 6. *E. subfuscus*, Gyll., fr.)

generally been misunderstood; and the species thus named by Linné has been called *E. holosericeus*, Oliv., whilst the Linnean name has been given to a different species, which Linné most probably confounded with *E. pectinicornis* ♀, but which Müller describes in his 'Fauna Fredrichsdalina' under the name of *E. sjælandicus*. Prof. Schiödt has now restored the original names to the proper species, and corrected the error which seems to be founded on a mere mistake of Olivier's.

¹ The species are thus classified:—A. Indistinct antennal grooves near the margins of the prothorax; antennæ serrated from the fourth joint; the anterior corners of the pronotum prominent, pointed, somewhat flattened, the posterior corners short, obtuse, with obsolete ridge. The posterior margin of epimera prothoracica slightly arched and undulated; prosternal spine short, thick; claw-joint of third pair of tarsi longer than their first joint (*E. tessellatus*). B. No antennal grooves; a. antennæ serrated from the fourth joint; * hind corners of pronotum without ridge; anterior corners of pronotum deflected, the posterior margin of pronotum obtusely bidentate; prosternal spine short, thick; legs slender; claw-joint of hind tarsi a little longer than the first joint (*E. bipustulatus*); ** hind corners of pronotum with sharp ridge; † posterior margin of epimera prothoracica bidentate, the inner tooth pointed; anterior corners of pronotum more or less deflected; prosternal spine long, thin, pointed; legs slender; claw-joint of third pair of tarsi longer than the basal joint (*E. cinctus*, *E. quercus*); †† posterior margin of epimera prothoracica angulate or obtusely bidentate; anterior corners of pronotum pointed, produced; prosternal spine long, gradually acuminate, with a more or less prominent knob before the point; legs powerful; claw-joint of hind tarsi club-shaped, longer than basal joint; claws long and powerful; § posterior margin of epimera prothoracica angulate; antennæ with small, lightly impressed, poriferous spots (*E. æneus*); §§ posterior margin of epimera prothoracica obtusely bidentate; antennæ without poriferous spots (*E. cruciatus*, *E. impressus*, *E. metallicus*). b. antennæ serrated from the third joint; anterior corners of pronotum produced, pointed; scutellum cordate; legs powerful; claw-joint of third pair of tarsi club-shaped, longer than basal joint; claws long, powerful; * posterior margin of epimera prothoracica arched, slightly undulated; prosternal spine long; posterior corners of pronotum ridged (*E. sjælandicus*, *E. pectinicornis*); ** posterior margin of epimera prothoracica obtusely bidentate; prosternal spine short; hind corners of pronotum without ridge (*E. castaneus*).

- II. Segmenta ventralia margine laterali membranacea, mobilia. Scrobiculi femorales prothoracis foris aperti. Mesosternum apice acutum. Oculi exserti.

Campylus, Fisch.

Elytra prothoraci superposita. *Epimera* mesothoracica coxas attingentia. *Oculi* exserti, granulati. *Frons* laminata. *Sulci antennarii* nulli. *Prosterni* processus in mucronem saltatorium sensim transiens. *Coxæ* posticæ lamina femorali angustissima. *Elytra* costa marginali integra, planiuscula, recta, post coxas posticas non inflecta. Segmentum quintum abdominis in femina post rotundatum, in mare truncatum, medio productum, segmentum sextum haud obtegens.

(1. *C. linearis*, L., fr. ; 2. *C. denticollis*, Fabr., r.)

MISCELLANEOUS.

Scheuchzeria palustris, Linn.

To the Editors of the Annals and Magazine of Natural History.

GENTLEMEN,—With great pleasure I am enabled to record that the Rev. O. M. Fielden, incumbent of Welsh Frankton, Shropshire, has this summer (1866) detected this rare plant growing in Welsh Hampton Moss, Shropshire, and thus has added a second Shropshire locality, and a fifth British one. Only three specimens were found, one of which is now before me.

I am, Gentlemen, yours, &c.

W. A. LEIGHTON.

Shrewsbury, Sept. 24, 1866.

On the Long-eared or Mule Deer of North America (Eucervus).

By Dr. JOHN EDWARD GRAY, F.R.S., &c.

The Long-eared or Mule Deer of the Western States of North America are very imperfectly known in Europe; and the examination of the horns, which I had not before seen, has shown me that they have been very erroneously placed with the genus *Cariacus*. Dr. Spencer Baird, in his excellent work on the Mammals of North America, has formed for them a distinct section of his genus *Cervus*.

The *Cariaci* or Savanna Deer have the upper part of the beam of the horns curved forward, with the upper branches arising from its hinder edge; they generally have a single subbasal snag some distance from the base; and the outside of the metatarsus has a short broad gland. The skull is elongate, narrow, and the suborbital pit is small. The Mule Deer, on the contrary, have a doubly forked suberect horn, like the genera *Blastocerus* and *Furcifer* of South and tropical America. They differ from both these genera in having a large elongated gland on the outside of the metatarsus, rather differently formed horns, and a broad short skull.

To this group I propose to give the generic name of *EUCERVUS*.